LSN Briefing to the
Presidential Advisory Committee on
HPCC, IT, and NGI

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Presented by

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Topics

- Setting the LSN agenda

- Private sector partnership

- Agency interactions

- LSN procedures

- NGI time line summary

- LSN FY 1998 budget

- LSN issues

Setting the LSN R&D Agenda

- **Agency missions**
  - DARPA – global defense needs (e.g., wireless for battlefield)
  - DARPA, DOE, NIST, NSA, NSF – R&D in advanced networking technologies
  - DARPA, DOE, NASA, NSF – advanced networks for connecting universities and Federal research institutions
  - NIH, NOAA – connectivity for research applications
  - NIH, VA – networked biomedical and health care applications

Private Sector Partnership

To accelerate the availability of advanced networking services and applications for R&E and for society

- ● Additional R&D is necessary and appropriate
  - ● Presidential Advisory Committee evaluation of the NGI Concept Paper
- ● Creating economic incentive
  - ● Promoting interoperability across industry
- ● Accelerating arrival of the business model
  - ● "Killer apps" may arise (again!) from research apps

Agency Interactions

- **Coordinated research**
  - advanced networking technologies
  - applications interfaces
- **LSN's Joint Engineering Team (JET) coordinates the interconnection of advanced Federal networks**
  - DREN, ESnet, NREN, NSF-vBNS
- **Multiagency connectivity**
  - NIH and NIST are working with NSF for High Performance Connectivity
- **Applications work is multiagency as appropriate**
  - NLM and AHCPR – testbeds on improving medical practices
  - NLM and VA – testbeds for delivering health care to rural and urban areas

LSN PROCEDURES

- ## Monthly meetings
  - CIC R&D Subcommittee
  - LSN
  - NGI Implementation Team
  - JET
  - Privacy and Security Working Group (P&SWG)
- ## Interaction with other CIC areas
  - Applications Council, HECC, HuCS, HCS
- ## Prepared the detailed agency-by-agency five-year NGI Implementation Plan

NGI Time Line Summary (1)

- **1999** -- 100+ site high performance testbed providing OC-3 (155mbps) connections over OC-12 (644mbps) infrastructure
- **1999** -- Federal, academic and industrial partnerships begin conducting applications/networking research on the 100x testbed
- **2000** -- 10+ site ultrahigh performance testbed providing OC-48 (2.4Gbps) connections
- **2001** -- Consortium conducting networking/applications research on the 1000x testbed
- **2000** -- Tested models for NGI protocols, management tools, QoS provisions, security, and advanced services

NGI Time Line Summary (2)

- **2000** -- 100+ high value applications testing and benefiting from high performance testbeds (eg, remote, real time collaborative NGI network control of select laboratories)

- **2001** -- Integrate QoS over a variety of technologies and carriers

- **2002** -- Terabit-per-second packet switching demonstrated

- **2002** -- 10+ advanced applications testing and benefiting from ultra high performance testbed

LSN FY 1998 Budget by Agency (1)

Agency	$M
DARPA	89.23
Networking Systems, Defense Technology Integration and Infrastructure, Global Mobile Infosystems, Global Grid Communications	
DOE	13.79
ESnet	
NASA	25.00
NREN	
NIH	28.19
NLM Intelligent Agent DB searching, NLM Biotechnology Informatics, DCRT High Performance Biomedical Computing Program, NLM HPCC, etc.	

LSN FY 1998 Budget by Agency (2)

NIST   5.46

     Info tech metrology, testing and applications, Systems
Integration for Manufacturing Applications, etc.

NOAA   2.70

     Networking Connectivity

NSA   2.18

     Very High Speed Networking

NSF   79.20

     NSFNET, Networking, Communications and the
Convergence of Computing and Communications,
Applications

VA   7.45

     Computerized Patient Record and Telemedicine,
Clinical Workstations and Medical Imaging, etc.

LSN FY 1999/FY 2000 Budgets

- ## FY 1999
  - Anticipate no more than 10 percent difference from FY 1998
  - Continue NGI at requested $100 million
  - No major change in the R&D agenda

- ## FY 2000
  - Continue NGI at requested $100 million
  - No major change in the R&D agenda

LSN Issues

- Full NGI funding
- Attracting applications
- Agency mission stability
- Transition from FNC, including support